



**PLAN FOR  
SELF-IMPLEMENTING CLEANUP OF  
PCB REMEDIATION WASTE  
AMERICAN TISSUE MILL  
AUGUSTA, MAINE**

Prepared for:  
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## 1.0 INTRODUCTION

On behalf of the City of Augusta (City), Summit Environmental Consultants, Inc. (Summit) has prepared this notification for self-implementation of Polychlorinated Biphenyl (PCB) remediation waste identified at the former American Tissue Mill, located at 54 Maple Street in Augusta, Maine (the Site). PCB Remediation Waste has been identified in soil and concrete along the exteriors of two former buildings on the property. Mr. William Bridgeo, City Manager for the City of Augusta, is authorized to sign the certification statement required by §761.61(a)(3)(E). His contact information is:

Mr. William Bridgeo  
City of Augusta  
City Center  
16 Cony Street  
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(207) 626-2336

The certification statement is attached as Appendix A. A Site Location Map is attached as Figure 1.

Based on the characterization activities performed at the Site, Summit determined that soils and concrete to the west of two former buildings are PCB-contaminated. The source of the PCBs identified originated from release(s) of transformers formerly located in these areas.

The City intends to remove PCB-contaminated materials to less than 1 part per million (ppm) in accordance with 40 CFR 761.61.

The Maine Department of Environmental Protection (MEDEP) has reviewed and approved of an Analysis of Brownfields Cleanup Alternatives (ABCA) written by Summit and dated February 15, 2011. The ABCA details the Site background, Site investigation findings, and the proposed mitigation plan. MEDEP will issue a "Certificate of Completion" following completion of Site mitigation and review of associated documentation.



## 2.0 BACKGROUND

### 2.1 SITE DESCRIPTION

The Site address is 54 Maple Street in Augusta, Maine (refer to Figure 1-Site Location Map). The Augusta Tax Assessor's Office currently identifies the Site as Lot 4 on Tax Map 39 and Lot 14 on Tax Map 40.

The 18.43-acre Site is located on the eastern side of the Kennebec River. The Site is zoned within the business and industrial district (IA).

Information from local officials and previous reports indicate that the Site was originally developed as a lock and saw mill in the 1830s. During the late 1880s several manufacturing operations occupied the site, including a box manufacturing company, a window sash company and the former Kennebec Heat and Light Company. In the late 1880s the first paper mill began operating at the Site. Since approximately 1900, the Site's primary usage has been that of a paper mill complex. From 1900 until approximately 1970, when Statler Tissue purchased the property, the mill utilized wood chips for paper manufacturing. From 1970 until mill operations ceased in 2001, recycled paper was the feed stock for paper manufacturing. From 2001 to 2009 the buildings stood dormant without tenants. In 2009 the buildings were demolished by Costello Dismantling Company, Inc. (Costello) under a contract with the City of Augusta (the City).

The structures previously on the property were utilized as follows:

1. The office building (No. 1) was wooden and burnt down in 2006. The pulp preparation building consisted of a steel sided building (Building 18) and brick building (Building 3) used in the preparation of the pulp (part of the steel building No. 18 burned in the 2006 fire).
2. The boiler building (Buildings 4 and 4A) housed four boilers used for heating the facility. Ductwork connected the building to the smokestack.
3. The conversion and paper machine No. 3 buildings (Buildings No. 6, 7, 8, 9, 10, and 11) housed staff offices, the No. 3 paper machine, and formerly contained machinery to cut and finish paper products manufactured at the mill. This complex also housed a storage area, machine, pipe, and metal shops, and a vehicle maintenance shop.
4. The paper machine No. 2 building (Buildings 13, 14, 14A, 15, 15A, 15B, and 16) was located in the middle of the Site and housed the water filtration plant, two paper machines (paper machine No. 1 was removed in 1996 and paper machine No. 2 was removed during demolition activities in 2009), storage space, and formerly contained conversion and finish machines.
5. The waste water treatment plant (WWTP) was located north of the main mill and was used to treat the on-site wastewater prior to discharge to the Kennebec River.
6. The lab building was used for office space and housed the laboratory associated with the WWTP operation. The sludge loading pad was used to store the sludge from the WWTP prior to loading and disposal at the East Augusta Sludge Landfill.
7. The boiler smokestack and fuel control storage building were located east of the main mill buildings at the end of Park Street.

## 2.2 SUMMARY OF PREVIOUS INVESTIGATIONS & REMEDIATION ACTIVITIES

### 2.2.1 Investigations

Environmental Assessment of Statler Tissue Company Properties in Augusta, Manchester, and Vassalboro, Maine; Normandeau Associates, Inc. (NAI), March 1996

#### *Storage Tanks*

One 50,000 gallon bare steel underground storage tank (UST) (Maine Department of Environmental Protection (MEDEP) Registration #774) to store Number (No.) 6 fuel oil was installed in 1972 and replaced in 1994. During the 1994 tank removal, approximately two feet of oil-saturated soil was encountered beneath the tank. Approximately 374 tons of contaminated soil was removed from the excavation. Following MEDEP approval, the excavation was backfilled.

According to Site records, the facility generated less than 550 gallons of waste oil. Waste oil was stored in 55-gallon drums located throughout the mill and within a 500-gallon above ground storage tank (AST) located within the vehicle tunnel beneath Building #7. NAI reported poor housekeeping in the vicinity of this AST and that this tank did not have secondary containment. The waste oil was blended with oil and burned in the mill boilers.

Two 1,000-gallon USTs, one for diesel and one for gasoline, were reportedly removed in 1986. One tank reportedly leaked, resulting in the removal of approximately 12 cubic yards of soil. One monitoring well (ST-1) was installed downgradient of the diesel UST to determine if groundwater had been impacted due to this release. Analytical results did not indicate groundwater impacts.

NAI reported "poor" secondary containment (i.e., an earthen berm and clay liner) for the wastewater treatment plant chemical ASTs. In addition, the report noted that storm water had filled the secondary containment area, resulting potential for berm overflow if a release were to occur.

#### *PCB Transformers/Capacitors*

Based on a 1994 survey conducted by Transformer Services, Inc. (TSI), 28 transformers were on-site. Of these 28 transformers, 18 were reported to contain oil with less than 50 parts per million (ppm) polychlorinated biphenyls (PCBs), nine with PCB concentrations between 50 and 500 ppm and one (located behind the wastewater treatment plant) with a PCB concentration greater than 500 ppm (123 capacitors were listed as being present on-site; however concentrations of PCBs were not reported. In December 1995, Eder Associates (EA) collected 11 samples (10 plus one duplicate) for PCB analysis. Nine of these samples were reported less than one (1) ppm and one sample was reported as 11 ppm. Sample locations were not identified in the report.

No samples for PCBs were collected by NAI.

#### *Soil and Groundwater Samples*

Soil and groundwater samples were collected at six locations (GP-1 to GP-6). In addition, NAI collected soil and groundwater samples at three locations (ST-1 to ST-3).

Soil and groundwater samples were submitted to a laboratory for volatile organic compound (VOC) and Resource Conservation and Recovery Act (RCRA) metal analyses, except for GP-4 (groundwater metals only) and GP-6 (no groundwater sample). Reported concentrations of

arsenic, chromium and lead exceeded the Maine Maximum Exposure Guidelines (MEGs) in GP-1, GP-2, GP-3, and GP-4. The MEG for barium was exceeded in GP-4. According to the map included in the NAI report, GP-4 was located near a former drum storage area across the roadway from Building #14. Low concentrations of toluene and xylene were reported in soil samples collected from locations GP-1, GP-2, and GP-4.

NAI completed borings and monitoring wells ST-1 and ST-2 in the vicinity of GP-4 and the chemical and empty drum storage areas. Boring and monitoring well ST-3 was located down gradient of the two reportedly removed 1,000-gallon diesel/gasoline USTs. Groundwater samples were collected from these wells and analyzed for RCRA metals and VOCs (ST-1 and ST-2) and VOCs and polycyclic aromatic hydrocarbons (PAHs) at ST-3. Low concentrations of arsenic and barium and potential lab contaminants (acetone, methylene chloride, and 2-butanone) were also reported.

#### Phase I ESA, MACTEC, June 2008 – performed under 128a Brownfield Grant funding

A 2008 Phase I Environmental Site Assessment (ESA) completed by MACTEC identified the following Recognized Environmental Conditions (RECs) on the Site:

- 1 Site Buildings –The possible use/presence of oils, solvents, metals, dyes, pulp preparation chemicals, and PCBs was reported within the Site buildings. These items may have spilled, been dumped/discarded onto building floors or directly to the ground outside of buildings. These actions may have resulted in potential migration of materials through floor cracks to the soils and groundwater below the buildings. Residual materials may be present in the floor drains and waste water pipes.
- 2 Transformers/Capacitors – Transformers were noted throughout the Site property. Transformer spills/leaks may have resulted in soil and building contamination. PCB oil may still be present in some transformers on-site. Figure 2 depicts the location of transformers observed by MACTEC.
- 3 Chemical Storage Areas – Historical records and site interviews indicate several areas of historic chemical storage for small quantities/drums of chemicals including the west side of Building #14A, adjacent to the river west of Building #15B and the basement of Buildings #15 through #W16. In addition, large storage tanks for chemicals used in the paper manufacturing process were currently or historically located in Building #14A, Building #3, south of Buildings #4 and #1, as well as at the Waste Water Treatment Plant (WWTP). Historic spills may have occurred at these locations, potentially resulting in contamination of soil or groundwater.
- 4 Fuel Storage Tanks – Several above and below ground fuel storage tanks were noted at the property. These include the current 50,000 gallon #6 fuel oil UST, a former 50,000 gallon fuel oil UST on the east side of Building #1, a former 500 gallon gasoline UST south of former Building #1, and a former waste oil AST located in the access road below Building 7. It is possible that spills/leaks at these locations have contaminated soil and groundwater.
- 5 Plant Piping and Drains – Chemicals used in the paper making process may have been transported from storage tanks to their location of use via piping, and been disposed of in floor drains and waste water drains/tanks. Floor drains were located within Buildings 16 and 10 in the center of the buildings away from transformers and oil storage areas. These lines may have had historic leaks. In addition, product pipes within buildings were reportedly not drained during the USEPA removal action, and the potential

presence of chemicals within these lines (e.g. caustic, acid, biocides) may potentially be harmful to trespassers and future site workers, as well as to the general environment. These lines therefore represent a material threat of release. In addition, the WWTP lagoons are full of water, and it is not known if contaminants are present in this water.

- 6 Historic Site Fires – At least two fires were noted in the Site history. A fire in approximately 1939 reportedly burned the building and warehouse at the approximate location of Building #7. A fire in 2006 burned Building #1 and part of Building #18. Historic fires may have resulted in soil or groundwater contaminated by PAHs and metals above regulatory criteria, as well as possible releases of dioxins and furans.

#### Building Demolition Oversight, Summit, 2009

From May to December 2009, Summit oversaw the demolition of structures on the property on behalf of the City of Augusta to secure the site, mitigate potential ongoing releases from on-site chemicals, transformers, and petroleum products, and to reduce physical hazards posed by deteriorating buildings.

Chemicals, bulk piping and small containers were removed prior to demolition of the structures by Clean Harbors, who had been retained by the demolition contractor, Costello Dismantling. Transformers and asbestos containing materials (ACM) were also removed and properly disposed of during the demolition process.

#### Underground Storage Tank Removal, EIGOV, September 8, 2009 – performed as a portion of a Targeted Brownfields Assessment Grant

USEPA Region 1 awarded a Targeted Brownfields Assessment (TBA) Grant to the City of Augusta to assist in the removal of a 50,000 gallon number six heating oil underground storage tank (UST). The UST was removed and the excavation inspected by a Maine Certified Geologist. No signs of petroleum impacts were observed during this inspection.

#### Underground Storage Tank Removal, Summit, December 11, 2009 – performed as a portion of the American Tissue Site Specific Assessment Grant

At the request of the MEDEP, Summit prepared an underground storage tank assessment report based upon the EIGOV report to provide closure documentation in accordance with MEDEP rules.

#### Site Investigation Memorandum, Summit, 2009 - performed as a portion of the American Tissue Site Specific Brownfields Grant

An initial field screening was conducted from September through December 2009 to further define the scope of future on-site investigations. The purpose of this initial field screening was to determine whether contaminants are migrating off site via groundwater. The results of pore water and surficial soil sample analysis supported the development of a Quality Assurance Project Plan (QAPP) to define magnitude and extent of source areas and potential AOCs. This information was used to focus the subsequent Phase II investigation.

#### *Pore Water*

Pore water sample results for most of the samples did not report concentrations of analyzed constituents above the two background locations (BK-MW-01 and BK-MW-02), with the exception of arsenic. Background results for arsenic were 6 ug/L and 7 ug/L, respectively while on-site results ranged from non-detect (ND) to a high of 102 ug/L (PW-6). A number of the elevated concentrations, specifically PW-9 through PW-19, were located in a grouped linear pattern along the

riverbank. The pattern of elevated arsenic detections may be associated with an on-site source or the result of on-site activities that may have mobilized naturally occurring arsenic. Lead results were similar to the range of the background results with the exception of PW-25 which was reported as 1,832 ug/L. This result is an outlier when compared to the data set. In addition, the two samples closest to it (PW-24 and PW-26) reported estimated concentrations of 1 ug/L and 2 ug/L, respectively. The result from PW-25 may be attributable to a localized release as this location is directly downgradient from the former Building #3 where elevated lead levels were noted to be present within soils in the basement.

DO readings, via the colorimetric kits used in the field, indicated that all of the samples collected were between 1 and 2 ppm for oxygen whereas samples of the Kennebec River were between 6 and 8 ppm.

VOCs were not reported present at elevated concentrations, with the exception of Chloromethane in samples PW-13, PW-14, PW-15, PW-16, PW-18, PW-27, and PW-28. Based upon the relatively low levels (6.1 ug/L to 27 ug/L), these results do not appear to represent a significant source of Chloromethane on-site, but further investigation of on-site groundwater may be warranted.

Compounds within the EPH and VPH analyses were all reported as non-detect with the exception of an estimated result for C9-C36 Aliphatic hydrocarbons (heavy-weight oils) of 103 ug/L at PW-29. This is believed to be due to the presence of the tar-like substance observed along the riverbank in this area. See Table 1 for analytical results.

#### *Transformer Areas*

During the first round of sampling on September 30 and October 1, 2009, seventeen samples (and one duplicate) were collected. Of these samples, four results were obtained from the lab reporting PCB concentrations greater than 1 ppm (SS-12, SS-18, SS-19, and SS-33). Two of these results were in locations near the former transformers connected to Building #14 (SS-18 and SS-19) and the other two were near the former wastewater treatment plant building (SS-12 and SS-33). Based upon the size of the AOCs, it was determined through conversations with USEPA and MEDEP, that additional samples may assist in defining the size the potentially affected areas. Of the 30 samples (and one duplicate) collected during the second sampling event on October 12, 2009, only two samples (B-118 and B-119) were reported at concentrations greater than 1 ppm. Samples collected in proximity to SS-12 and SS-33 were reported as non-detect for all PCB compounds.

#### *Railroad Siding*

Five samples were collected on September 30, 2009 to assess conditions along the railroad siding beside the former Building #7. Of these five samples, three (SS-07, SS-9, and SS-10) reported at least on polycyclic aromatic hydrocarbon (PAH) compound above the MEDEP's Residential Remedial Action Guideline (RAG). The other two sample locations (BK-SS-03 and SS-08) were also reported to contain low levels of PAHs, but at concentrations below the Park User RAG. Based upon the results obtained from BK-SS-03 (background), it has been determined that BK-SS-03 may not be representative of background conditions and has been included in the site-specific samples.

The PAHs are most likely associated with the use of creosote as a preservative on the railroad ties. During sampling activities, Summit noted a strong creosote odor, as well as visually observed black staining on railroad ties used as a retaining wall in the area of the sampling. See Table 2 for analytical results.

Based upon the results obtained from the samples collected, it was reported that several areas may have been impacted by localized Site activities (e.g., transformers, discharge pipes, etc).

Summit recommended the following investigations for the Phase II ESA:

1. Advance soil borings adjacent to the former buildings, as well as directly upgradient of several of the pore water locations, to further assess potential source areas.
2. Install monitoring wells to assist in developing a better understanding of groundwater impacts, if any, and potential migration routes to the Kennebec River.
3. Complete further sampling of the identified PCB-impacted areas to more accurately develop a remediation plan for submission to the USEPA Toxic Substances Control Act (TSCA) unit.
4. Obtain additional surficial soil samples across the Site to determine whether PAH results observed in sample SS-201 are attributable to a past building source or are representative of a site-wide issue (i.e. boiler ash from former stack, on-site fires, etc.).
5. Complete additional background sampling to determine if on-site arsenic and PAH concentrations are consistent with background concentrations.

Phase II ESA, Summit, October 2010 –performed as a portion of the American Tissue Site Specific Brownfields Grant

Summit completed the following work as a portion of this Phase II ESA:

- 23 test pits (one sample for PCBs collected and analyzed from TP-9 – result was ND);
- 15 soil borings (one sample for PCBs collected and analyzed from SS-433 – result was ND)
- 22 geoprobe borings (three total samples for PCBs were collected and analyzed from B-405, B-406, and B-407 – all three results were ND);
- Nine monitoring well installations with groundwater sampling (no PCB samples collected);
- Nine surficial soil samples in the area within the railroad siding on the property (no PCB samples collected);
- 38 surficial soil samples across the site for site-wide characterization (four soil samples for PCBs, all ND); and
- 15 surficial soil samples for PCB analysis in areas surrounding former transformer pads (4 samples had detections greater than 1 ppm).

The property was divided into four Areas of Concern for the Phase II ESA:

AOC 1 – Former Buildings

As the property was primarily a paper mill from the turn of the century until 2001, the historic buildings may have been sources of hazardous substances. Due to this past usage and the possibility that lead-based paint may have been on the structure, the potential for heavy metal (lead and arsenic) impacts is present in both the soils and groundwater on the property. Acidic and basic chemicals, used in the paper industry, may also cause naturally occurring metals in the soils to mobilize. In addition, VOCs may have been used within the process as degreasers, lubricants, or cleaners. Migration of VOCs, fuel oil or diesel would be as an LNAPL or dissolved phase in the groundwater. Overland transport by storm water could also provide a pathway to the Kennebec River if a release of substantial size had occurred. Public water is supplied to the

area around the site so the groundwater does not pose a risk unless encountered during construction or remediation activities or via vapors into future construction.

#### AOC 2 – Former Transformer Areas

Transformers were located throughout the property during its use as a paper mill. During the first phase of this investigation, soil and concrete samples were collected within all of the areas observed to contain transformers prior to the demolition. Analysis of the data reported from these samples indicate that two areas on the property have the potential for PCB impacts which warrant soil removal, based upon the EPA TSCA rules. Additional surficial sampling was warranted to further delineate these areas to attempt to narrow the focus of a removal effort and to begin the development of a self-implementing cleanup plan. Surficial soil samples were planned to be collected for PCB analysis.

#### AOC 3 – Railroad Siding

A railroad siding abuts the property on the eastern side. Railroad ties are may contain arsenic depending upon their age (i.e. older ties contain arsenic) and have the potential to contain high levels of PAHs. These COCs can leach into the surrounding soils and become a contact threat to people in the area. During the first phase of this investigation, high levels of arsenic and PAHs were documented along the eastern border in the area where several buildings had previously been located. During this investigation, additional surficial soil samples were collected to determine the extent, both horizontally and vertically, of these impacts. Samples were analyzed for PAHs and total arsenic. These impacts were expected to be within soils and not to have leached into groundwater.

#### AOC 4 – Bark Pile (Northern Section)

The northern section of the property has never been developed, but was used as a bark storage area therefore, the impacts to these areas may not be as extensive as the formerly developed areas. However, the possibility existed that waste materials may have been dumped within this area along with the bark. Test pits were completed in this area to determine extent of bark mulch.

Sample results obtained during this round of sampling documented impacts in three specific areas of the Site that will require remediation prior to redevelopment. These areas are:

1. The river's edge south of the former boiler house where tarlike substance (assumed to be No. 6 oil) was observed (designated AOC 1);
2. Surficial soils surrounding the former large transformer bank in the center of the Site and near the former wastewater treatment facility (AOC 2); and
3. Surficial soils along the railroad siding on the eastern edge of the property (AOC 3).

Based upon these areas, Summit recommended completing an ABCA to develop remediation strategies and associated remediation cost estimates for each AOC.

#### PCB Sampling, Summit, June 2011 & August 2012

Summit collected additional soil and concrete samples to further focus the PCB removal effort.

## 2.2.2 Remedial Actions

USEPA Region Pollution Reports for Site No. 01DM, D.O. #0058, POLREP #1 Dated March 1, 2007, POLREP #2, Dated June 11, 2007, and POLREP #3, dated September 4, 2007

Pollution Reports (POLREPs) completed by the U.S. Environmental Protection Agency (USEPA) present the details and activities of removal actions completed between October 23, 2006 and August 30, 2007. According to these reports, two employees from American Tissue were retained to manage chemicals and to maintain heat throughout the buildings from the plant's shutdown until late 2005/early 2006. At that time fuel purchases ceased and the employees stopped being paid.

The USEPA created an inventory of chemicals present throughout the facility. The inventoried chemicals were subsequently removed from the Site for proper disposal including the following removed by USEPA:

- Two thickness gauges containing a krypton 85 radiation source
- More than 2,250 gallons of PCB-contaminated oil drained from 28 transformers
- 33 lab packs of small containers of chemicals
- Eighty-four (84) 55-gallon drums
- Two 230-gallon totes
- Several small transformers and capacitors
- Liquids and/or solids from bulk storage tanks including ammonium hydroxide, phosphoric acid, sodium hypochlorite, sodium hydroxide, alum, kymene, and lime.

At the USEPA's request, MEDEP removed the following:

- Fifty (50) 55-gallon drums of non-hazardous waste oil
- 3,000-gallons of transformer oil with PCB concentrations less than 1 ppm
- 3,000-gallons of solmet oil

### 12 Month Exemption Memorandum, dated September 3, 2008

The purpose of this Action Memorandum was to request and document approval of the request for a 12 month exemption for the removal action at the American Tissue Mills of Maine Site. The remaining activities that required completion were the removal of PCB contaminated oil contained in electrical equipment and further assessment and removal if hazardous substances were found in charged piping within the facility.

### Draft Removal Program After Action Report for the American Tissue Mills of Maine Site, Augusta, Kennebec County, Maine 23 October 2006 through 3 December 2008, dated February 2009

Site activities included the following: establishing work zones; draining and flushing the oil from 28 polychlorinated biphenyl (PCB)-containing transformers, 30 PCB-containing oil fuse cutouts, and 96 PCB-containing capacitors, and the subsequent disposal at an EPA-approved facility; draining or cleaning 17 aboveground storage tanks (ASTs); consolidating and disposing of hazardous materials from approximately 15 buildings through laboratory packing or wastestream profiling; transporting and disposing of hazardous materials at an EPA-approved facility; coordinating and documenting the materials which were transported off site for reuse



and recycling; and demobilizing all personnel and equipment upon completion of removal activities. This report was provided to Summit as "Draft" without appendices.

### **2.3 SURROUNDING RECEPTORS**

Public water is available to the site area. Site topography grades to the abutting Kennebec River to the east. Property to the south is industrial (scrap yard) with properties to the east being a mix of undeveloped, commercial, and cemetery usage. Property to the north is undeveloped and the Kennebec River abuts the property to the west.

### **3.0 SITE CHARACTERIZATION BY SUMMIT**

Based on the past presence of PCB-contaminated oil-containing transformers, Summit conducted characterization of soil and concrete in these areas as a portion of a Phase II ESA. The sampling program included the following:

1. Collection of soil and concrete samples in areas of former transformer or capacitor storage near the former wastewater treatment facility.
2. Collection of soil and concrete samples in areas of former transformer storage near the former mill buildings.

The samples collected during Summit's investigations were analyzed by:

- USEPA Region 1 Laboratory in North Chelmsford, Massachusetts for PCBs by USEPA Method 8082;
- Absolute Resource Associates Laboratory (Absolute) in Portsmouth, New Hampshire for PCBs by USEPA Method 8082 using the EPA Method 3540 (Soxhlet Extraction);
- Analytics Laboratory (Analytics) in Portsmouth, New Hampshire for PCBs by USEPA Method 8082 using the EPA Method 3540 (Soxhlet Extraction).

The sample results are summarized on Table 1; laboratory data sheets including QA/QC reports are provided in Appendix B.

#### **3.1 BULK SOIL AND CONCRETE SAMPLES – SEPTEMBER 30 AND OCTOBER 1, 2009**

Soil samples from former transformer storage areas were collected as grab samples by removing the top one inch of soil and transferring the soil to a pre-cleaned glass four ounce jar. Concrete samples were collected using a pre-cleaned concrete bit and a hammer drill. One inch of concrete was pulverized within the selected area and placed within a pre-cleaned four-ounce jar. Samples were collected on September 30, 2009 and October 1, 2009, and subsequently submitted to Analytics for PCB analysis using soxhlet extraction.

During this round of sampling on September 30 and October 1, 2009 seventeen (17) samples (and one duplicate) were collected. Of these samples, four results were obtained from the lab reporting PCB concentrations greater than 1 ppm (SS-12, SS-18, SS-19, and SS-33). Two of these results were in locations near the former transformers connected to Building #14 (SS-18 and SS-19) and the other two were near the former wastewater treatment plant building (SS-12 and SS-33). See Table 1 for analytical results.

#### **3.2 BULK SOIL AND CONCRETE SAMPLES – OCTOBER 12, 2009**

Based upon the results of the first round of sampling, Summit coordinated with the USEPA Region 1 laboratory to complete 30 samples to supplement the results from the previous sampling round. Samples were analyzed following the Region 1 field screening methodology. As with the initial round of samples, soil samples from these areas were collected as grab samples by removing the top one inch of soil and transferring the soil to a pre-cleaned glass four ounce jar. Concrete samples were collected using a pre-cleaned concrete bit and a hammer drill. One inch of concrete was pulverized within the selected area and placed within a pre-cleaned four-ounce jar.

Of the thirty (30) samples (and one duplicate) collected during the second sampling event on October 12, 2009, only three samples (B-118, B-119, and B-127) were reported at

concentrations greater than 1 ppm. Samples collected in proximity to SS-12 and SS-33 were reported as non-detect for all PCB compounds. See Table 2 for analytical results.

### **3.3 BULK SOIL AND CONCRETE SAMPLES – AUGUST 30, AUGUST 31, AND SEPTEMBER 20, 2010**

On August 30, August 31 and September 20, 2010, Summit collected one soil sample from a test pit at 2' below ground surface, three soil samples from Geoprobe borings at 0-6" below ground surface, one soil sample from a soil boring at 0-6" below ground surface, and nineteen (19) soil samples and one duplicate at depths of 0-1" or 1-2" below ground surface. Five of the samples (SS-443, SS-444, SS-446, SS-447, and SS-450) reported concentrations of PCBs, predominantly Aroclor 1248, above 1 ppm. SS-446 also reported the presence of Aroclor 1260 above 1 ppm. See Table 3 for analytical results.

### **3.4 BULK SOIL AND CONCRETE SAMPLES – JUNE 30, 2011**

On June 30, 2011, Summit collected thirty-six (36) soil and concrete samples at depths of 0-0.5" and then 0.5-1". All samples were submitted to Absolute Resource Associates. Summit requested that all samples from 0-0.5" be analyzed but only samples exhibiting a detection have the 0.5-1" sample run from that location. Four sample locations (SS-505A, SS-505B, SS-507A, and SS-507B) reported concentrations above 1 ppm. See Table 4 for analytical results.

### **3.5 BULK SOIL SAMPLES – AUGUST 7, 2012**

Based upon comments received from EPA in July 2012 from the initial Self-Implementation Plan submission, on August 7, 2012, Summit and the MEDEP collected six (6) soil samples at depths of 2-6" from around the areas of previous samples SS-505 and SS-507. All samples were submitted to Analytics. Analytical results were above 1 ppm for samples SS-601, SS-603, SS-604, SS-605, and SS-606. None of the samples were above 50 ppm. See Table 5 for analytical results.

## **4.0 CLEANUP PLAN**

### **4.1 OBJECTIVE**

The objective of the cleanup activities conducted under this Plan is to remove soil, concrete, and pavement from adjacent to the former mill building locations. Following removal of these materials the property will be redeveloped based upon the plans currently being completed with the entirety of the property being available for high occupancy usage.

### **4.2 CLEANUP GOAL**

Soil and concrete, with concentrations greater than 1 ppm, will be collected and properly disposed of as PCB Remediation Waste from the two areas of concern on the property.

The first area of concern is located near the former wastewater treatment plant. The extents of the impacts are approximately 10' x 10' in two separate locations to a depth of approximately three inches. See Figure 2.

The second area of concern is located adjacent to the former mill structure. The extents of the impacts are approximately 100' x 20' to a depth of approximately six inches. See Figure 3.

### **4.3 PUBLIC NOTIFICATION**

Summit will notify the U.S. EPA, MEDEP, and the City of Augusta City Manager regarding the performance of work prior to implementation of the Plan. As the site is secure, there should be no impact to the general public. However, the public will be kept informed of the progress of this project through public City Council meetings.

### **4.4 NECESSARY PERMITS**

Summit has submitted an Analysis of Brownfields Cleanup Alternatives to the MEDEP and has received approval for the site mitigation. Summit has identified no other permit requirements.

### **4.5 SOIL, CONCRETE, AND PAVEMENT REMOVAL**

Summit will be on-site to oversee contractor removal of soil and concrete from the property. PCB waste will be recovered using an excavator removing the soil and concrete and placing it in roll-off containers. The containers will be kept closed except during transfer of waste to the containers. Used HEPA filters and containment materials (i.e., plastic sheeting, tape, lumber) will be managed as PCB Remediation Waste. Following appropriate waste characterization activities, the PCB Remediation Waste is scheduled to be disposed of at Waste Management's TREE Health Care Waste facility in Rochester, New Hampshire.

### **4.6 CONFIRMATORY SAMPLING AND CLEANUP VERIFICATION**

Following the removal of the PCB-contaminated soil and concrete, Summit will conduct sampling of the underlying soil to assess the potential for residual PCBs in accordance with a Quality Assurance Project Plan submitted to the USEPA. Sampling will be conducted in accordance with 40 CFR 761 Subpart O. A grid will be laid out to delineate sampling points 1.5 meters apart oriented to the grid axes to allow for four sampling points for each type of PCB Remediation Waste (sand and gravel (fill), concrete, and asphalt). If PCBs are identified at concentrations greater than 1 ppm, additional soil or concrete will be removed and disposed of properly and resampled until the results are below 1 ppm.

All soil samples collected will be sampled for PCBs and prepared using EPA extraction methods 3540C (soxhlet).

#### **4.7 CONTINGENCIES**

Our client and the contractor are prepared to collect and properly dispose of additional PCB Remediation Waste if actual volumes exceed the estimates detailed herein.

## 5.0 PROPOSED IMPLEMENTATION SCHEDULE

Summit proposes the following implementation schedule for the Plan:

Activity	Completion Date
Submittal of Plan	May 10, 2013
U.S. EPA Approval (Expected)	June 10, 2013
Material Removal	June – July 2013

### CERTIFICATION

The undersigned owner of the property where the cleanup site is located and the party conducting the cleanup certify that all sampling plans, sampling collection procedures, extraction procedures and instrumental/chemical analysis procedures used to assess or characterize the PCB contamination at the cleanup site are on file at the location indicated below and are available for EPA inspection, as set forth below:

#### Document Location

City of Augusta  
City Center  
16 Cony Street  
Augusta, Maine 04330

#### **Property Owner and Party Conducting the Cleanup**

  
\_\_\_\_\_

Authorized Signature

5/8/13  
\_\_\_\_\_

Date

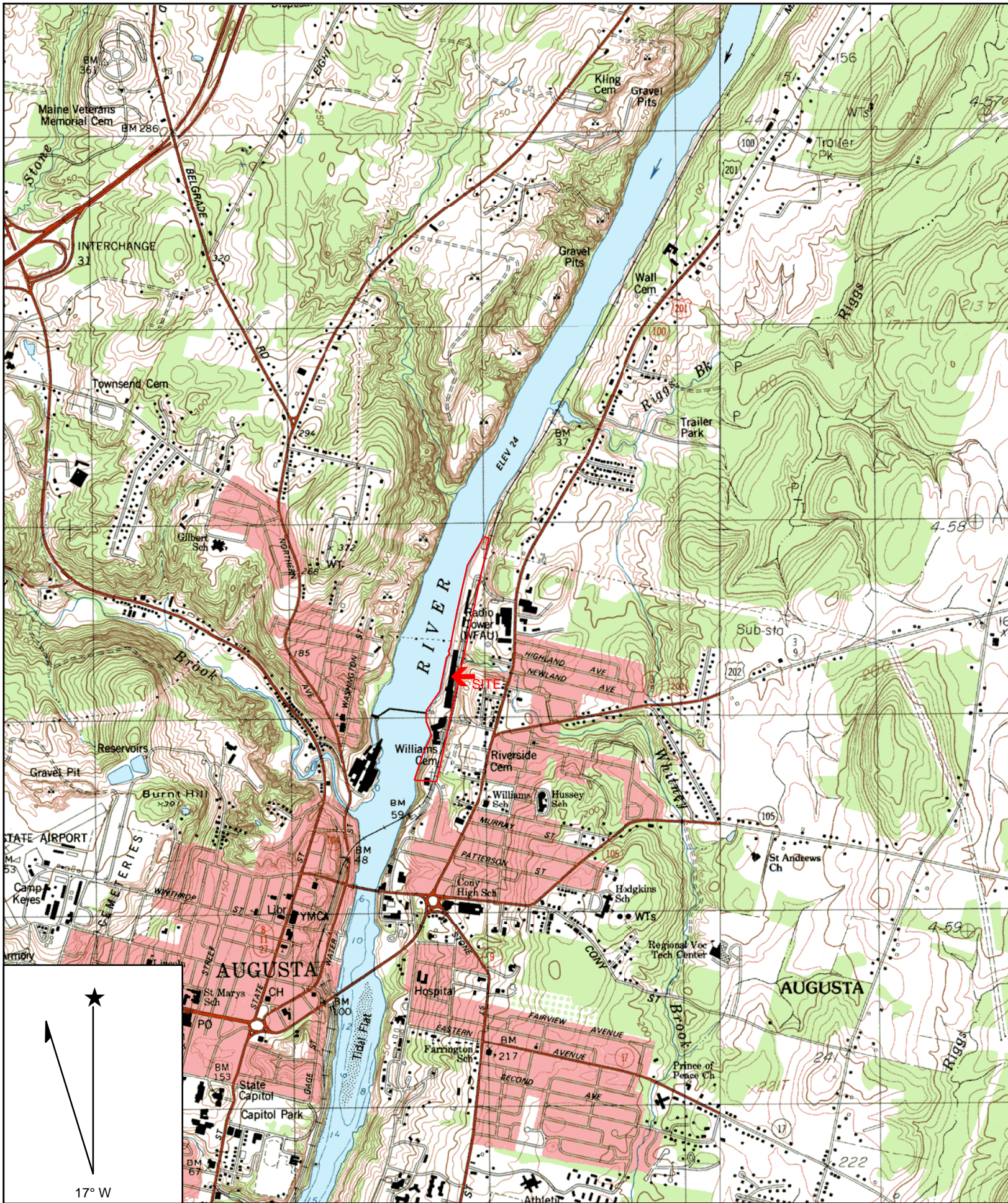
WILLIAM BRIDGER  
\_\_\_\_\_

Name of Authorized representative (print)

CITY MANAGER  
\_\_\_\_\_

Title





Name: AUGUSTA  
 Date: 3/14/2013  
 Scale: 1 inch equals 2000 feet

Location: 044° 19' 47.7" N 069° 45' 49.1" W  
 Caption: Figure 1: Site Location  
 American Tissue  
 Augusta, Maine

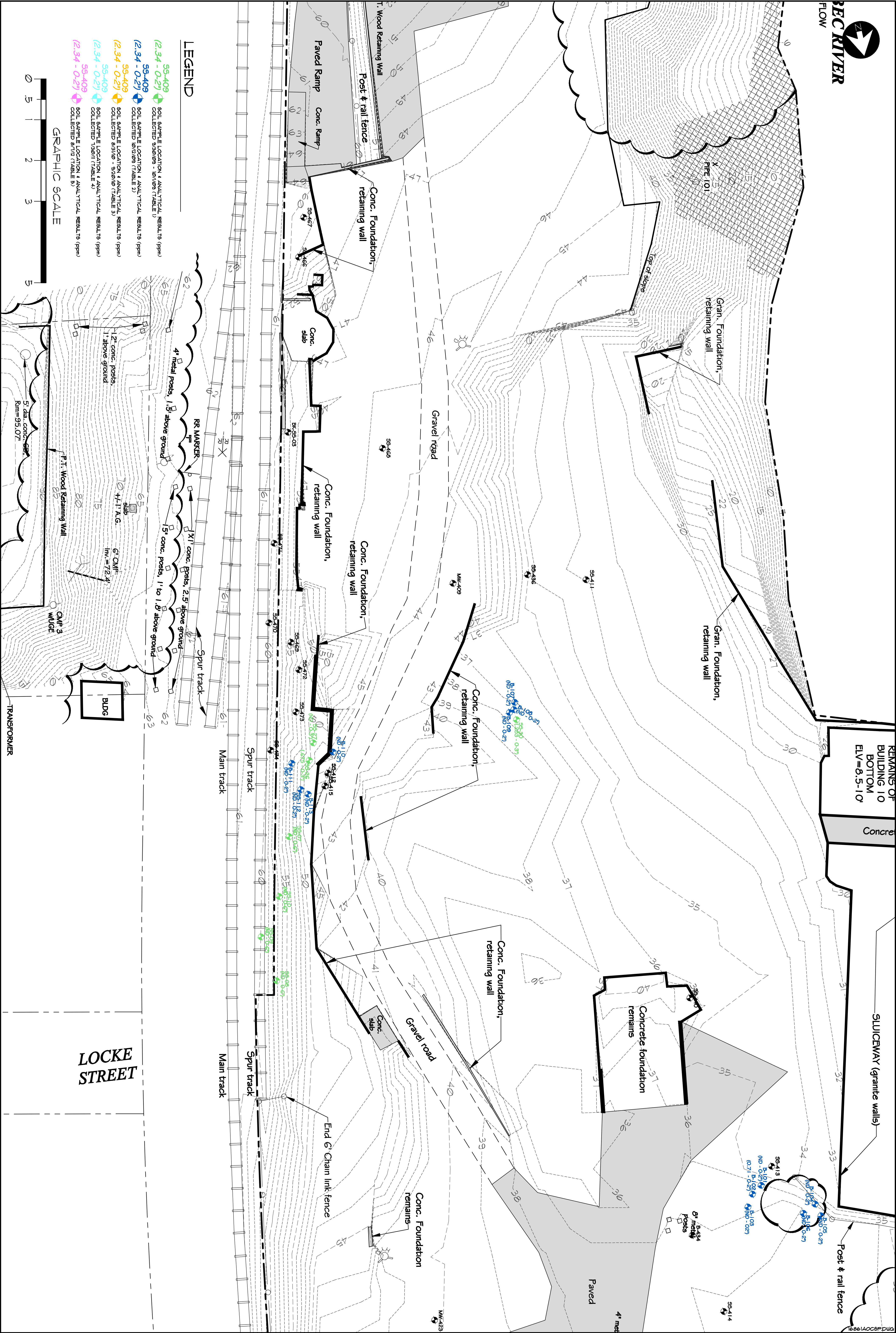
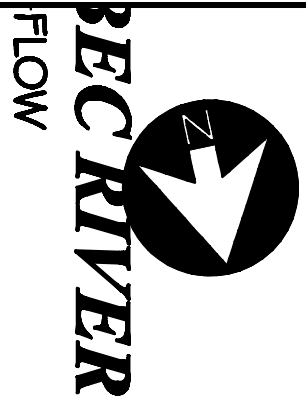










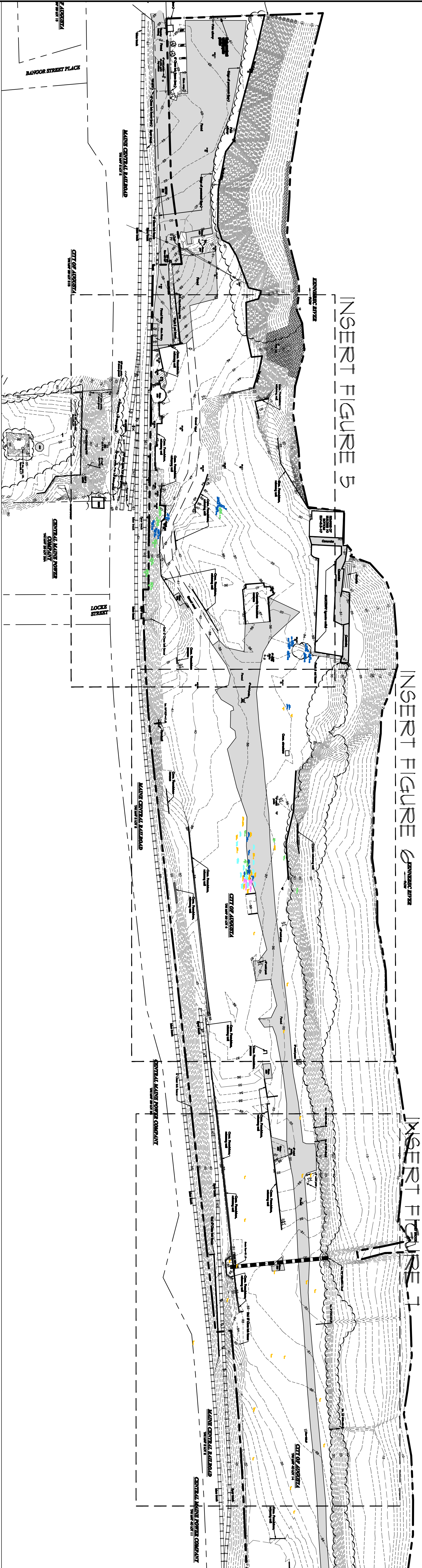






SITE PLAN SOUTH

1" = 80'



16861AOCSP.DWG

TND	TND	JKC
DRAIN BY:	DESIGNED BY:	APPROVED BY:

BROUNFIELDS CLEANUP -  
FORMER AMERICAN  
TISSUE MILL

PROJECT:  
SCALE: AS SHOWN  
DATE: FEBRUARY 2013

SAMPLE LOCATION  
PLAN

TITLE:

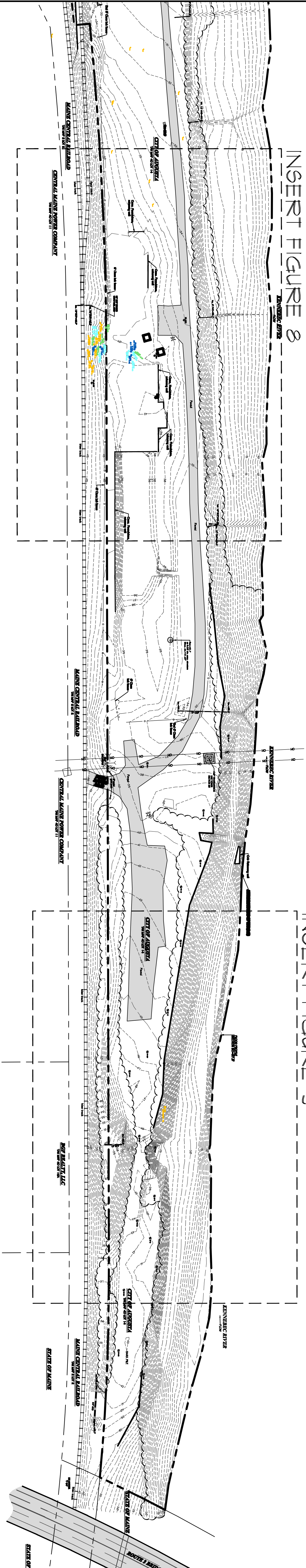
CITY  
OF  
AUGUSTA

CLIENT:

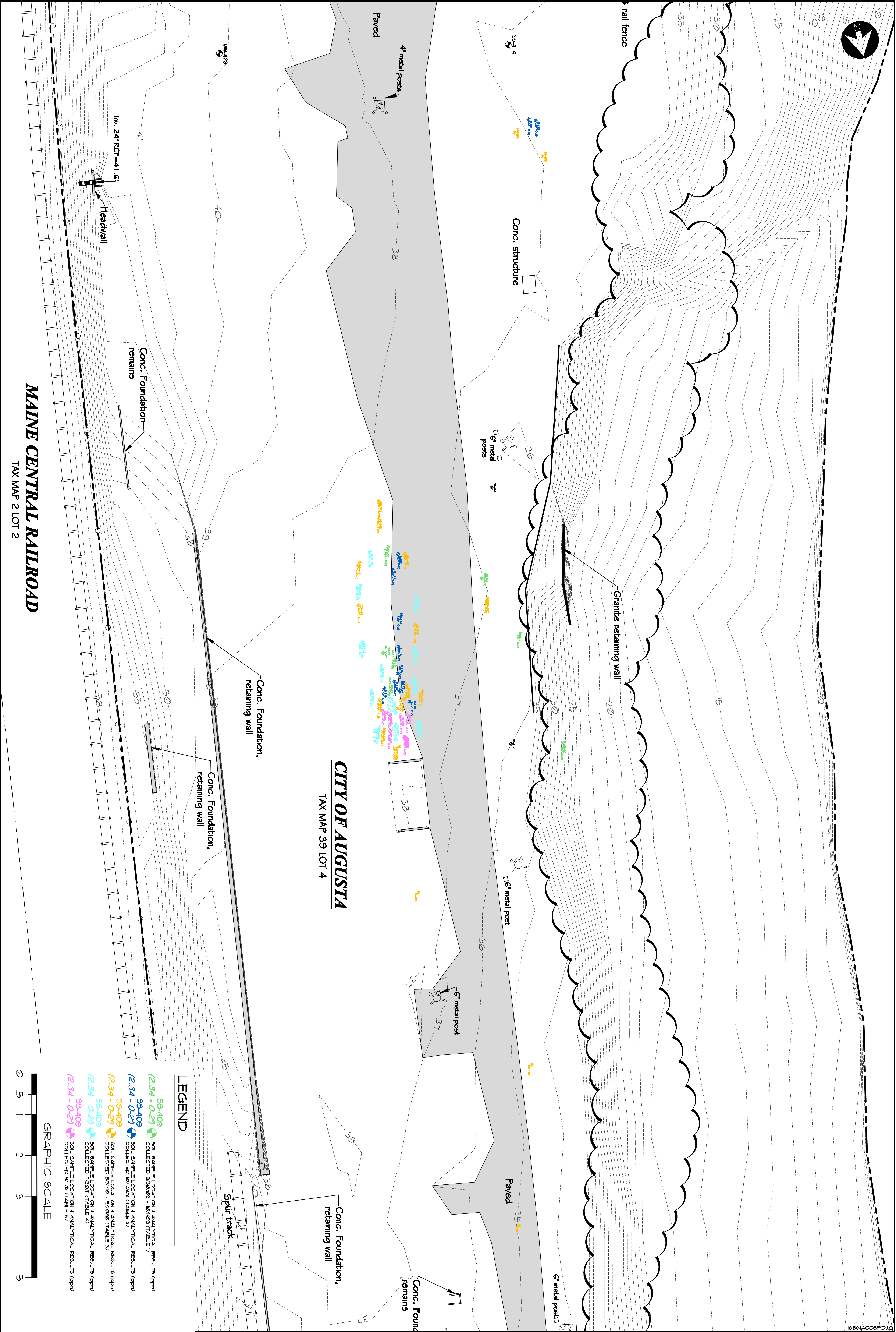


SITE PLAN NORTH

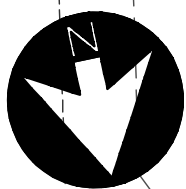
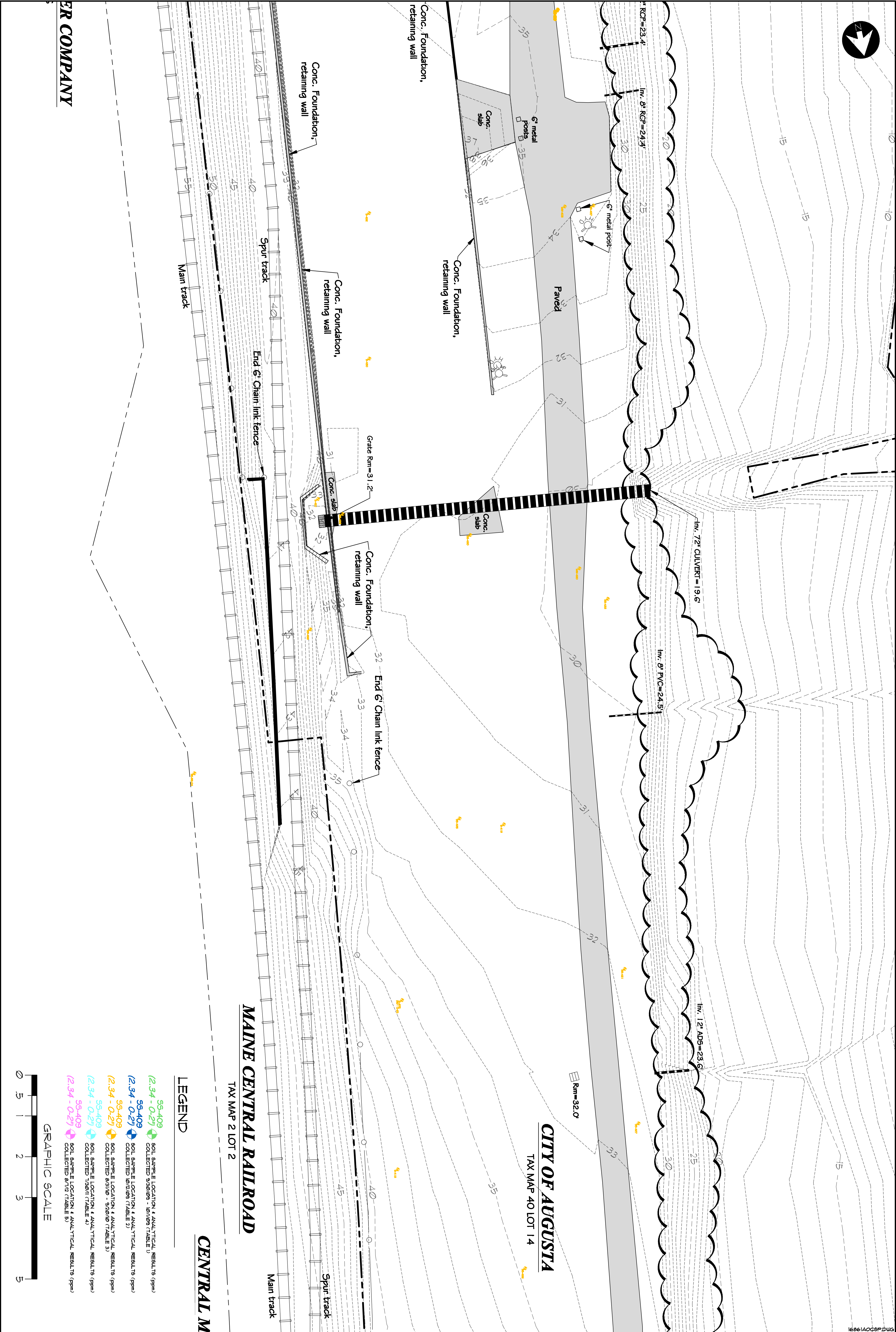
1" = 80'







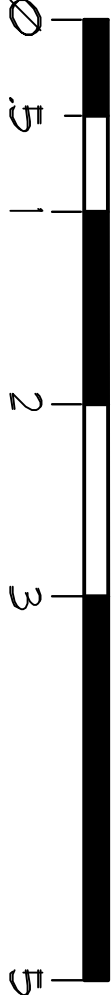




LEGEND

- 59-409 SOIL SAMPLE LOCATION & ANALYTICAL RESULTS (PPM)  
COLLECTED 9/26/09 - 10/1/09 (TABLE 1)  
(2,34 - 0-27)
- 59-409 SOIL SAMPLE LOCATION & ANALYTICAL RESULTS (PPM)  
COLLECTED 10/1/09 (TABLE 2)  
(2,34 - 0-27)
- 59-409 SOIL SAMPLE LOCATION & ANALYTICAL RESULTS (PPM)  
COLLECTED 8/31/09 - 9/26/09 (TABLE 3)  
(2,34 - 0-27)
- 59-409 SOIL SAMPLE LOCATION & ANALYTICAL RESULTS (PPM)  
COLLECTED 7/30/11 (TABLE 4)  
(2,34 - 0-27)
- 59-409 SOIL SAMPLE LOCATION & ANALYTICAL RESULTS (PPM)  
COLLECTED 8/1/12 (TABLE 5)  
(2,34 - 0-27)

GRAPHIC SCALE



ER COMPANY

PROJECT:	BROWNFIELD'S CLEANUP - FORMER AMERICAN TISSUE MILL		
	SCALE: 1"=20'		
DATE:	FEBRUARY 2013		
TND DRAIN BY:	TND DESIGNED BY:	JKC APPROVED BY:	

CLIENT:

CITY OF AUGUSTA

TITLE:

SAMPLE LOCATION PLAN

FIGURE:

7

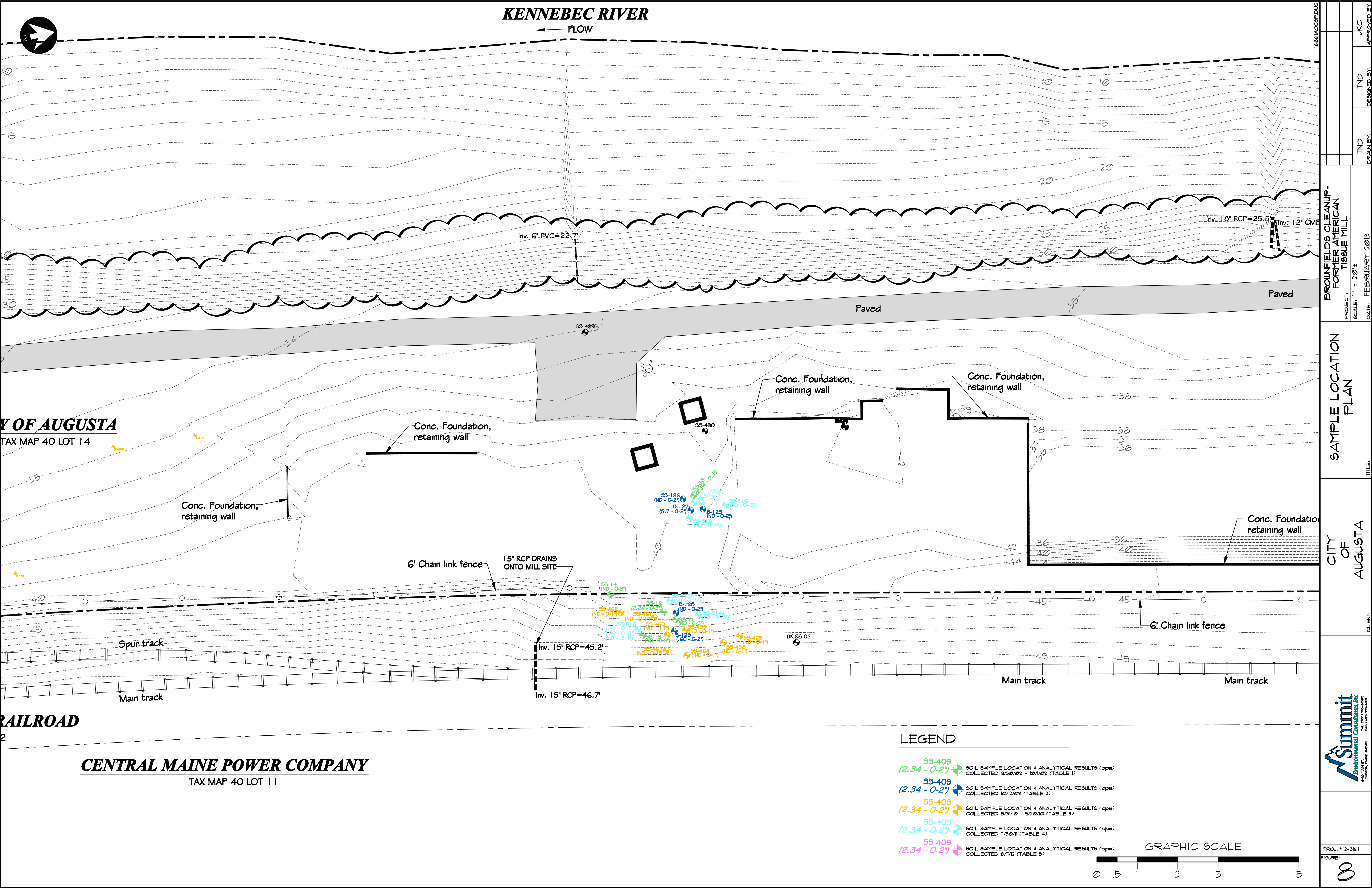
PROJ. #:

12-3161

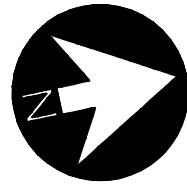
Summit Environmental Consultants, Inc.

1000 Main St., Suite 200  
Lebanon, Maine 04454  
Tel: (207) 798-1234 Fax: (207) 798-6008

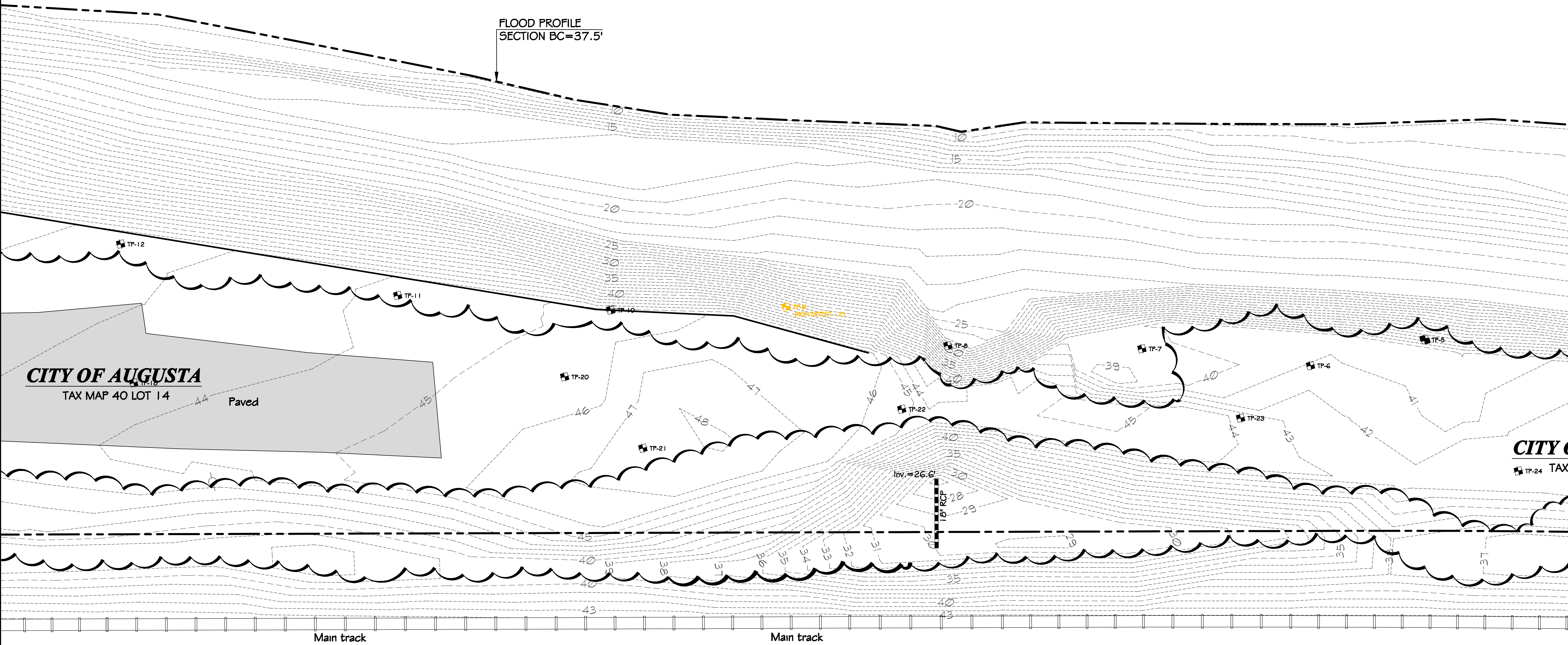






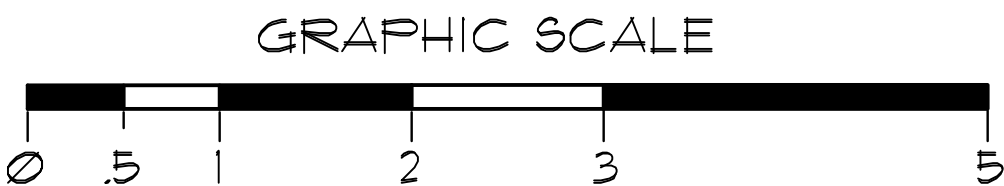


HEAD OF TIDE (0.0)



LEGEND

- SOIL SAMPLE LOCATION & ANALYTICAL RESULTS (ppm)  
COLLECTED 8/30/09 - 10/1/09 (TABLE 1)
- SOIL SAMPLE LOCATION & ANALYTICAL RESULTS (ppm)  
COLLECTED 10/12/09 (TABLE 2)
- SOIL SAMPLE LOCATION & ANALYTICAL RESULTS (ppm)  
COLLECTED 8/31/10 - 9/20/10 (TABLE 3)
- SOIL SAMPLE LOCATION & ANALYTICAL RESULTS (ppm)  
COLLECTED 7/30/11 (TABLE 4)
- SOIL SAMPLE LOCATION & ANALYTICAL RESULTS (ppm)  
COLLECTED 8/1/12 (TABLE 5)



**BGF REALTY, LLC**  
TAX MAP 40 LOT 1 6A

16861A008P.DWG		BROOKFIELD'S CLEANUP - FORMER AMERICAN TISSUE MILL		PROJECT		TND		TND		JKC	
		SAMPLE LOCATION PLAN		SCALE: 1" = 20'		DESIGNED BY:		CHECKED BY:		APPROVED BY:	
		CITY OF AUGUSTA		DATE: FEBRUARY 2013							
		CLIENT:		TITLE:							
		Summit Environmental Consultants, Inc.		PROJ. # 12-3161							
		FIGURE: 10									